

**ADJUSTABLE GAS SPRING SUSPENSION SYSTEM**

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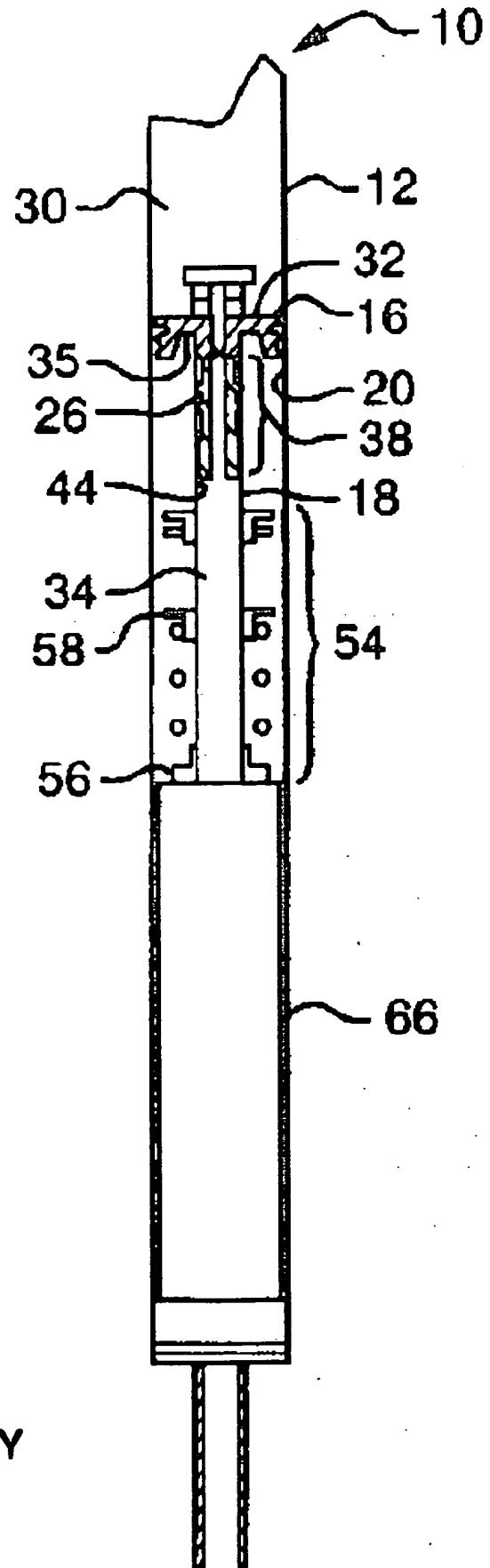
**Cited documents:**

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**Abstract of WO9903726**

A suspension system (10) for a bicycle or other vehicle or apparatus, the system including at least one telescoping strut comprising a first telescoping member (12) and a second telescoping member (14), the first and second telescoping members being telescopingly and coaxially engaged with each other so that the strut is compressible by relative movement of the telescoping members toward each other and expandable by relative movement away from each other. A piston (16) may be interconnected with the second telescoping member and slidably positioned within the first telescoping member. The piston separates a primary compression spring chamber into two gas chambers (30, 34) connected by an adjustable port, whereby compression or expansion of the strut creates a damping force that resists such relative movement of the telescoping members, resulting in the primary compression spring having a frequency-sensitive spring rate. The crack force, spring rate and other characteristics of the suspension system may be adjusted using a piston location adjuster to adjust the piston height, and/or a negative preload spring to apply a compressive preload force to the telescoping strut.



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